

THE
ONTARIO WATER RESOURCES
COMMISSION

REPORT ON

WATER POLLUTION SURVEY

of the

MIMICO CREEK WATERSHED

MARCH 1961

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ONTARIO WATER
RESOURCES COMMISSION

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R e p o r t o n

W A T E R P O L L U T I O N S U R V E Y

o f t h e

M I M I C O C R E E K W A T E R S H E D

by

P. Lonergan, C.S.I. (C),
Engineer's Assistant.

March, 1961

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I N D E X

	Page
INTRODUCTION	1
DESCRIPTION OF STREAM	1
SAMPLING PROCEDURE	2
EXPLANATION OF LABORATORY TESTS	2
PRESENT STATUS OF SOURCES OF POLLUTION	6
SUMMARY OF ANALYTICAL RESULTS OF STREAM SAMPLES	11
SUMMARY AND CONCLUSIONS	12
RECOMMENDATIONS	14

REPORT

ONTARIO WATER RESOURCES COMMISSION

WATERSHED: Mimico Creek

RE: Mimico Creek Survey

FIELD INSPECTION BY: A.D. McConnell & P. Lonergan

DATE OF REPORT: March, 1961

REPORT: P. Lonergan

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INTRODUCTION

An investigation was undertaken in the Mimico Creek Watershed to review progress in pollution control.

The procedure followed was to examine the waters of Mimico Creek, to locate all sources of pollution and to recommend a pollution abatement program where there is an impairment of the quality of the water.

This report reviews the present status with respect to sources of pollution in Mimico Creek and recommends that corrective action be taken wherever necessary.

DESCRIPTION OF STREAM

The Mimico Creek Watershed is a narrow strip of country draining an area of about 28 square miles. The stream is bounded on the north and east by the Humber River Watershed, on the north-west and west by that of Etobicoke Creek, and on the west by the watershed of a small creek which flows through New Toronto. Two (2) streams rise north of Highway No. 7 and a third stream

has its source north-west of Malton in the Township of Chingua-cousy. These branches join north-east of Malton where the creek flows south-east through the Townships of Toronto and Etobicoke respectively, to Lake Ontario.

SAMPLING PROCEDURE

Sampling points are shown on the appended watershed map. These were selected with a view to providing essential information. Grab samples were collected, namely, forty (40) ounce samples for chemical analysis, and six (6) ounce samples for bacteriological analysis. Tests were conducted at the Ontario Water Resources Commission's Laboratory. The analyses of samples obtained from the various sources are shown in Table 1.

EXPLANATION OF LABORATORY TESTS

The analytical determinations used in the survey are listed below. An explanation of each is given as an aid in interpreting the significance of the tests.

Biochemical Oxygen Demand (B.O.D.)

The biochemical oxygen demand test indicates the amount of oxygen required for stabilization of the decomposable organic matter found in sewage, sewage effluent, polluted waters or industrial wastes by aerobic biochemical action. The time and temperature used are five (5) days and 20°C., respectively.

The B.O.D. of a stream should not exceed 4 parts per million, while for raw sewage it may vary from 100 to 300 p.p.m.

Sewage treatment plant, storm sewer and industrial waste effluents should have B.O.D. contents of 15 p.p.m. or less.

Solids

The analyses for solids include tests for total, suspended and dissolved solids. The former measures both the solids in solution and in suspension. Suspended solids indicate the measure of undissolved solids of organic or inorganic nature whereas the dissolved solids are a measure of those solids in solution.

Land erosion, sewage and industrial wastes are significant sources of solids. Domestic sewage contains about 0.2 lbs. of suspended solids per capita per day. Solids in industrial wastes vary with the type of industry.

The effects of suspended solids in water are reflected in difficulties associated with water purification, deposition in streams, interference with navigation, and injury to the habitat of fish.

The suspended solids content of effluents to streams should not exceed 15 p.p.m.

Turbidity

Turbidity is a measure of the fine suspended solids in water such as silt and finely divided organic matter. Where suspended solids values approach 20 parts per million or less, the results are usually reported as turbidity in silica units.

Bacteriological Examinations

The membrane filter technique was used to obtain a direct

enumeration of coliform organisms. These organisms are normal inhabitants of the intestines of man and other warm-blooded animals. They are always present in large numbers in sewage and are, in general, relatively few in number in other stream pollutants. The results are reported as M.F. coliform count per 100 millilitres.

The count in streams should not exceed 2,400. Raw sewage may contain many million coliform bacteria per 100 ml.

Hydrogen Ion Concentration

The hydrogen ion concentration (pH value) of a water indicates its relative acidity or alkalinity. It is a measure of intensity rather than of quantity. A neutral water has a pH of 7.0. Higher values are in the alkaline range and the lower in the acid range.

Alkalinity

Alkalinity represents the concentration of carbonates, bicarbonates, hydroxides, and occasionally borates, silicates, and phosphates. Industrial waste discharges high in alkalinity generally affect the hardness of the water. Hardness is an economic factor in the use of a water supply either for domestic or industrial purposes.

Phenolic Compounds

Phenols and phenolic equivalents were measured by the Gibbs Method with modifications. Phenols react with chlorine to produce intensely aromatic compounds. These compounds, even when

highly diluted, may give a taste and odour to the water which is variously described as medicinal, chemical or iodoform. Phenols taint fish and are toxic to fish depending on the concentration. Normal water contains no phenolic compounds. Plant effluents should be limited to 20 p.p.b. of phenol or phenolic equivalents.

Oils and Ether Soluble Materials

These include oils and all other ether soluble materials such as tarry substances and greases. The presence of these pollutants renders water difficult and sometimes impractical to treat, either for industrial or domestic use. Oils make the stream unsightly and the water unfit for bathing. They coat water craft and are a hazard to wild fowl.

Cyanides

Cyanides are probably the most toxic substances in industrial wastes. Concentrations over 0.05 p.p.m. are not acceptable in a drinking water supply. Low concentrations of between 0.1 and 0.3 p.p.m. are fatal to fish. Cyanides are not natural components of surface waters. Plant effluents should contain no cyanides.

Chromium

Chromium is a element which can be toxic in excessive amounts. Discharges to watercourses should contain no chromium.

Acidity

Acidity of water is a measure of the total amount of acid

substances present in water expressed as parts per million of equivalent calcium carbonate.

Iron

The presence of more than traces of iron in river water is generally undesirable. Waters containing high iron contents are unsuitable for domestic or industrial purposes unless treated for its removal. Iron in solution in trade wastes really constitutes potential suspended matter since a precipitate will form when the waste reacts with the natural alkalinity of a river water.

The iron content of stream waters following initial dilution should not exceed 0.3 p.p.m. This quality in the receiving waters will probably be attained if effluents are limited to 17 p.p.m. of iron.

PRESENT STATUS OF SOURCES OF POLLUTION

(a) Storm Sewers

Tabulated in Table 1 is a description of all known sewer outlets to Mimico Creek, stream sampling points, and the laboratory analyses of the samples collected.

1. Township of Toronto

No effluents were observed from storm sewers in the Township of Toronto which have outlets to the Mimico Creek Watershed at the time of this survey.

2. Township of Etobicoke

Laboratory results revealed that the effluents from the following storm sewers located in the Township of Etobicoke were satisfactory.

<u>Sampling Point No.</u>	<u>Township Key No.</u>
MCD - 10.0 (W)	T19
MC - 5.7 (W)	70
MC - 4.9 (W)	65
MC - 3.8 (W-3)	44
MC - 3.3 (W)	42
MC - 3.1 (W-2)	40
MC - 2.9 (W-1)	141
MC - 1.9 (W)	25
MC - 1.4 (W)	6
MC - 1.1 (W)	17

The effluents from the remaining storm sewers sampled at the time of the survey were not acceptable for discharge to a stream. These are listed below.

<u>Sampling Point No.</u>	<u>Township Key No.</u>
MC - 10.2 (D)	-
MC - 9.4 (WI)	T6
MC - 5.4 (W-2)	68
MC - 3.1 (W-1)	41
MC - 2.3 (W)	27
MC - 1.6 (WI)	16
MCM - 0.6 (W)	7
MC - 0.1 (W)	4

The following information relative to the latter storm sewer outlets was obtained during the survey.

MC - 10.2 (D)

The contents of the discharge from the ditch at sample point No. MC - 10.2 (D) constituted a source of pollution in the Township of Etobicoke. Drainage from a landfill site at the north-west corner of Disco Rd. and Renforth Dr., operated by the municipality, was mainly responsible for this condition. The effluent from Dominion Structural Steel Ltd. in part was also contributory. (Sample point No. MC - 10.4 (P))

MC - 9.4 (WI)

The laboratory results of samples collected from the storm sewer at sample point No. MC - 9.4 (WI) (Township Key No. T6) revealed that the effluent had a pH of 3.5, which is less than the minimum objective of 5.5. In addition, the iron content exceeded the recommended upper limit of 17 p.p.m. The source of this material was found to be the discharge of wash water from Dominion Steel and Coal Corporation Ltd.

MC - 5.4 (W-2); MC - 2.3 (W); MC - 1.6 (WI)

The effluents from the storm sewers at sample point No. MC - 5.4 (W-2), MC - 2.3 (W) and MC - 1.6 (WI) contained undesirable material. This is confirmed by the high B.O.D. and suspended solids concentrations. The ether solubles content at the latter storm sewer exceeded the Ontario Water Resources Commission's objective of 15 p.p.m. for such effluents.

MC - 3.1 (W-1); MCM - 0.6 (W); MC - 0.1 (W)

Sample results indicated a B.O.D. content slightly in excess of the objective of 15 p.p.m. from the storm sewer MC - 3.1 (W - 1). The phenol concentrations in the effluents from the latter two (2) storm sewers were high. In addition, the ether solubles content in the effluent from outlet No. MC - 0.1 (W) was not acceptable.

3. Town of Mimico

MCM - 0.3 (W)

The effluent from this storm sewer which discharges to a ditch at the south-east corner of Audley and Newcastle streets had an unsatisfactory B.O.D. content.

(b) Sewage Treatment Plant

A summary of the sanitary chemical analyses of samples collected by this Commission and by the Township of Toronto from the Malton sewage treatment plant during the period Feb., 1960, to January, 1961, is shown in Table 2 attached to the report. For the most part, effluent quality from the Malton plant exceeded the objectives of the Ontario Water Resources Commission. In general, the degree of treatment was not comparable to that expected for the activated sludge type of plant.

Reference should be made to the report dated December 9, 1960, on these works by the Ontario Water Resources Commission.

(c) Sewage Pumping Stations

There are six (6) sewage pumping stations located on the

Mimico Creek Watershed. Each of the sewage pumping stations have by-pass arrangements which may discharge to Mimico Creek and its tributaries during periods of heavy rainfall. By-passing from these stations was not evident at the time of this survey.

(d) Industries

Avro Aircraft Limited

Laboratory results revealed that the discharge from Avro Aircraft Ltd. at point No. MCS - 13.5 (I) constituted a source of pollution within Malton. Attention is directed to the high B.O.D. The analyses of samples collected from the industrial waste outfall at point No. MCS - 13.2 (I) were satisfactory.

Orenda Engines Limited

Drainage from Orenda Engines Limited at points No. MCS - 13.2 (D) and No. MCS - 13.2 (P) was free of polluting material. The analyses of samples obtained from outlet No. MC - 12.3 (I-1) revealed an undesirable cyanide content. Sample results from the remaining outlet, point No. MC - 12.3 (I-2) indicated a high B.O.D.

Dominion Structural Steel Limited

The effluent from the drain which serves Dominion Structural Steel Limited, point No. MC - 10.4 (P), was satisfactory.

Canadian Germicide Company Limited

The Canadian Germicide Company Limited is engaged in the

manufacturing of disinfectants and liquid and powdered hand soaps. Waste originating from the washing of returned metal containers is discharged to Mimico Creek at sample point No. MC - 9.8 (I). Sample results shown in Table 1 indicated that a great deal of polluting material was emanating from this plant.

Associated Mineral Wool Company Ltd.

This firm manufactures mineral wool insulation. Wastes from two (2) sources, namely, screen washing waste and an overflow from a recirculating cooling water pond are discharged to a tributary of Mimico Creek. The latter flow was not sampled at this time. However, a sample of the screen washing waste showed high phenol and suspended solids concentrations.

SUMMARY OF ANALYTICAL RESULTS OF STREAM SAMPLES

In August and November, 1960, samples were obtained from Mimico Creek and its tributaries. Sampling points are shown on the attached plan and the laboratory analyses are presented in Table 1.

August Survey

Samples obtained from Mimico Creek and its tributaries in the Malton area showed fluctuating values in August, 1960. Impairment was noted in Mimico Creek at Malport Rd. and in the south and east branches at Derry Rd. E. The stream immediately below Malton showed some impairment with respect to B.O.D. downstream to Richview Side Road. The B.O.D. of the creek from Dundas Street to Royal York Rd. was satisfactory. Between The

Queensway and Lake Shore Rd., B.O.D. values again exceeded OWRC objectives. Generally, coliform counts from Indian Line south to Lake Ontario were excessive. The tributary of Mimico Creek above Lake Shore Rd. contained much polluting material.

November Survey

In November, 1960, no flow was noted in Mimico Creek at or above Malport Rd. Sample results showed some impairment in Mimico Creek below Malton with respect to B.O.D. downstream to Indian Line. Below this point, the creek met the OWRC objectives for a clean stream as far as Royal York Road. The B.O.D. concentrations in the stream between The Queensway and Lake Shore Road were unsatisfactory, whereas the bacterial condition was acceptable. Laboratory results again revealed that the tributary north of Lake Shore Road was in poor condition.

SUMMARY AND CONCLUSIONS

As a result of the investigation, it is apparent that wastes are gaining access to the Mimico Creek Watershed through eight (8) storm sewer outlets in the Township of Etobicoke and one (1) outlet in the Town of Mimico.

Where a connection carrying waste material to a municipal storm sewer is permitted, it is the responsibility of the municipality to exclude these wastes and to ensure that proper treatment facilities are provided either by the connection to the sanitary sewer or by private means.

In general, the sewage pumping stations are capable of handling the average daily sewage flows. However, during heavy rainfall and flooding conditions by-passing of dilute sewage to Mimico Creek and its tributaries may occur. During these periods the pumping stations represent potential sources of pollution of the stream.

It has been difficult to develop a good quality activated sludge at the Malton sewage treatment plant because of under-loading. Recent studies have shown that the combined industrial, sanitary and cafeteria wastes discharged to the plant from the Avro - Orenda sewer system have interfered with normal treatment of the sewage from the Police Village of Malton. The Sanitary Engineering Division of the OWRC will continue its efforts to establish an operating procedure which can be used at the Malton sewage treatment plant to produce a satisfactory effluent.

In reference to pollution of the Mimico Creek Watershed from industrial wastes, action is required by Avro Aircraft Ltd. and Orenda Engines Limited to meet the objectives of the Ontario Water Resources Commission for industrial waste effluents. This matter will be examined when an industrial waste study is conducted at Malton by the Industrial Waste Branch of this Commission. Waste discharges to Mimico Creek at The Queensway from Canadian Germicide Company Limited and to a tributary between Lake Shore Road and the Canadian National Railway from Associated

Mineral Wool Company Limited also require correction. Recent discussions have been held with these industries regarding remedial action.

Mimico Creek and its tributaries showed B.O.D. and coliform values ranging from 1.9 p.p.m. to 31 p.p.m.; and from 1 per 100 ml. to 190,000 per 100 ml. respectively. The stream and its tributaries in the Malton area showed impairment. Generally, the B.O.D. and/or coliform counts in Mimico Creek were unsatisfactory below Malton and downstream through the Township of Etobicoke during the August survey. In November the creek showed some impairment with respect to B.O.D. below Malton to Indian Line and from The Queensway to Lake Shore Road. From Renforth Drive to Royal York Road, the creek was in an acceptable condition. On both occasions laboratory results revealed that the tributary above Lake Shore Road was in an unsatisfactory condition.

RECOMMENDATIONS

1. Action be taken by the Township of Etobicoke to locate and eliminate the sources of polluting material gaining access to the storm sewers as noted in this report.

2. The Town of Mimico locate and sever the connections carrying waste material to the storm sewer having its outlet at Audley and Newcastle streets.

3. Waste treatment facilities at Avro Aircraft Limited and Orenda Engines Limited be improved to meet the objectives of

the Ontario Water Resources Commission.

4. Remedial measures be taken by Canadian Germicide Company Limited and Associated Mineral Wool Company Limited to prevent the discharge of inadequately treated wastes to the Mimico Creek Watershed.

5. An effort be made to improve the efficiency of treatment at the Malton sewage treatment plant operated by the Township of Toronto.

All of which is respectfully submitted,

G. M. Galimbert

Prepared by: P. Lonergan
Supervised by: J.R. Barr

G. M. Galimbert, Director,
Sanitary Engineering Division.

Approved by:

A. E. Berry
General Manager

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TABLE I

ANALYTICAL RESULTS OF WATERCOURSE & TRIBUTARY OUTLET SAMPLES

MIMICO CREEK WATERSHED

ALL ANALYSES EXCEPT PH REPORTED IN P.P.M., UNLESS OTHERWISE NOTED.

SAMPLING POINT NO.	TOWNSHIP KEY NO.	LOCATION AND GENERAL DESCRIPTION	DATE 1960	5-DAY B.O.D.	S O L I D S			TURBIDITY IN SILICA UNITS	M.F. COLIFORM COUNT/100 ML.
					TOTAL	SUSP.	Diss.		
MC-14.5	-	WEST BRANCH AT 5TH LINE EAST	AUG. 3 NOV. 8	7.8	-	-	-	19	520
					NO FLOW NOTED				
MC-13.8 R	-	RELIEF SEWER	NOV. 8		NO FLOW NOTED				
MC-13.4	-	MIMICO CREEK AT MALPORT RD.	AUG. 3 NOV. 8	25.	-	-	-	47	29,000
					NO FLOW NOTED				
MC-13.4 W-1	-	STORM SEWER - MALPORT RD.	NOV. 8		NO FLOW NOTED				
MC-13.4 W-2	-	STORM SEWER - MALPORT RD.	NOV. 8		NO FLOW NOTED				
MC-13.2 R	-	RELIEF SEWER	NOV. 8		NO FLOW NOTED				
MC-13.1 P	-	OUTLET - AVRO AIRCRAFT LTD. (FORMERLY S.T.P. OUTLET)	NOV. 8		FLOWING BUT NOT SUFFICIENT FOR SAMPLING				
MC-13.0	-	MIMICO CREEK ABOVE JUNCTION WITH SOUTH BRANCH	AUG. 3 NOV. 8	5.6 4.2	- 428	- -	- -	20 4	940 23
MCS-13.5 I	-	DRAINAGE FROM AVRO AIRCRAFT LTD.	NOV. 8	43.	208	26	182	-	59
MCS-13.2 I	-	INDUSTRIAL WASTE OUTFALL - AVRO AIRCRAFT LTD.	NOV. 8	2.5	200	-	-	3	1,700
					ETHER SOLUBLES - 1.0;			PHENOL IN P.P.B. 0.0	
MCS-13.2 P-1	-	DRAIN FROM ORENDA ENGINES LTD.	NOV. 8		NO FLOW NOTED				
MCS-13.2 D	-	DITCH FROM ORENDA ENGINES LTD.	NOV. 8	2.2	184	-	-	3	52
MCS-13.2 P	-	ORENDA ENGINES LTD. - PLANT NO. 1 OUTLET	NOV. 8	2.3	302	-	-	2	7

SAMPLING POINT No.	TOWNSHIP KEY No.	LOCATION AND GENERAL DESCRIPTION	DATE 1960	5-DAY B.O.D.	S O L I D S			TURBIDITY IN SILICA UNITS	M.F. COLIFORM COUNT/100 ML.
					TOTAL	SUSP.	DISS.		
MCS-13.0	-	SOUTH BRANCH AT DERRY RD. EAST	AUG. 3	12	-	-	-	21	3,100
			NOV. 8	5.0	302	-	-	3	3,100
MC-12.8	-	MIMICO CREEK ABOVE JUNCTION WITH NORTH BRANCH	AUG. 3	2.7	-	-	-	21	2,900
MC-15.2	-	MIMICO CREEK AT TOWN LINE	NOV. 8		NO FLOW NOTED				
MCN-14.9 W	-	STORM SEWER OUTLET	NOV. 8		NO FLOW NOTED				
MCN-12.8	-	NORTH BRANCH JUST ABOVE JUNCTION	AUG. 3		NO FLOW NOTED				
			NOV. 8		NO FLOW NOTED				
MCN-12.7 W	-	STORM SEWER - JUSTINE DR. & CAPRICORN CRES.	NOV. 8		NO FLOW NOTED				
MC-12.5 R	-	BY-PASS SEWAGE PUMPING STATION	NOV. 8		NO FLOW NOTED				
MC-12.5	-	MIMICO CREEK AT DERRY RD. E.	AUG. 3	2.9	-	-	-	20	1,800
MCE-12.6 W	-	STORM SEWER - JUSTINE DR.	NOV. 8		NO FLOW NOTED				
MCE-12.5	-	EAST BRANCH AT DERRY RD. E.	AUG. 3	37	-	-	-	49	14,000
			NOV. 8	7.2	384	-	-	11	14
MC-12.3 I-1	-	NORTH OUTLET FROM ORENDA ENGINES LTD.	NOV. 8	3.0	154	-	-	2	37
					PHENOL IN P.P.B. - 0; CYANIDE AS HCN - .35; CHROMIUM - 0.0				
MC-12.3 T	-	MALTON S.T.P. EFFLUENT			SEE TABLE 2				
MC-12.3 I-2	-	SOUTH OUTLET FROM ORENDA ENGINES LTD.	NOV. 8	26.	238	8	230	-	300
					PHENOL IN P.P.B. - 0; CYANIDE AS HCN - 0.0				
MC-12.1	-	MIMICO CREEK BELOW MALTON S.T.P. OUTFALL	AUG. 3	6.4	-	-	-	13	1
			NOV. 8	12.0	280	-	-	-	20
MC-11.0	-	MIMICO CREEK AT INDIAN LINE	AUG. 3	7.2	-	-	-	16	16,000
			NOV. 21	6.8	236	-	-	10	96
MC-10.2 D	-	DITCH FROM ETOBICOKE TOWNSHIP LANDFILL SITE	NOV. 21	23	418	-	-	30	640

SAMPLING POINT No.	TOWNSHIP KEY No.	LOCATION AND GENERAL DESCRIPTION	DATE 1960	5-DAY B.O.D.	S O L I D S			TURBIDITY IN SILICA UNITS	M.F. COLIFORM COUNT/100 ML.
					TOTAL	SUSP.	DISS.		
MC-10.4 P	-	DRAIN FROM DOMINION STRUCTURAL STEEL LTD.	DEC. 2	8.0	886	372	404		1,980
MC-10.2	-	MIMICO CREEK AT RENFORTH DRIVE	AUG. 3	11	-	-	-	19	580
			NOV. 21	4.8	326	-	-	5	90
MCD-10.0 W	T19	54" STORM SEWER - EASEMENT S. FROM DISCO RD. EAST OF RENFORTH DR.	NOV. 21	4.	476	162	314	-	50
MCDV-9.8	T14	18" STORM SEWER - WEST SIDE #27 HWY. SOUTH OF DISCO RD., DEPARTMENT OF HIGHWAYS	NOV. 21		NO FLOW NOTED				
MC-9.4 W1	T6	48" STORM SEWER - EASEMENT W. FROM HIGHWAY #27, NORTH OF DIXON ROAD TO MIMICO CREEK	DEC. 2	7. PH - 3.5;	556 ACIDITY - 240;	16	540 IRON - 52.	-	20
MC-9.0	-	MIMICO CREEK AT DIXON SIDE ROAD	AUG. 3	9	-	-	-	57	8,000
			NOV. 21	2.6	510	-	-	15	70
MC-8.9 W	139	60" STORM SEWER - EASEMENT S. OF DIXON CROSSING RENFORTH DR.	DEC. 6		NO FLOW NOTED				
MC-8.1 W	131	6' X 4' STORM SEWER - EASEMENT N-W #27 AND #401	NOV. 21		NO FLOW NOTED				
MCT-7.9 W-1	T15	39" STORM SEWER - EASEMENT S.W. OF MARTIN GROVE RD. AND REDGRAVE DR.	DEC. 6		NOT SAMPLED				
MCT-7.9 W-2	T15	42" STORM SEWER - EASEMENT S.W. OF MARTIN GROVE RD. AND REDGRAVE DR.	DEC. 6		NOT SAMPLED				
MC-7.3	-	MIMICO CREEK AT RICHVIEW SIDE ROAD	AUG. 3	10	-	-	-	18	19,000
			NOV. 21	4.4	436	-	-	40	150
MC-7.2 R	-	BY-PASS SEWAGE PUMPING STATION - WEST SIDE OF CREEK, SOUTH SIDE RICHVIEW SIDE RD.	NOV. 21		NO FLOW NOTED				
MC-7.2 W	122	30" STORM SEWER - EASEMENT WEST OF DECAIRIE CIRCLE	NOV. 21		NO FLOW NOTED				
MC-6.8 W	75	36" STORM SEWER - EASEMENT WEST FROM DALEGROVE CRES.	DEC. 6		NO FLOW NOTED				
MCB-6.6 W	73	60" STORM SEWER - EASEMENT EAST OF HWY. #27 AND ERIN-GATE DR.	DEC. 6		NO FLOW NOTED				

SAMPLING POINT No.	TOWNSHIP KEY No.	LOCATION AND GENERAL DESCRIPTION	DATE 1960	5-DAY B.O.D.	S O L I D S			TURBIDITY IN SILICA UNITS	M.F. COLIFORM COUNT/100 ML.
					TOTAL	SUSP.	DISS.		
MC-6.3 W-1	72	18" STORM SEWER - EASEMENT NORTH-EAST FROM SEDGEBROOK CRESCENT			NOT LOCATED				
MC-6.3 W-2	71	30" STORM SEWER - EASEMENT WEST FROM PUCKERIDGE CRES.	DEC. 6	FLOWING, BUT NOT SUFFICIENT FOR SAMPLING					
MC-6.2 W	74	36" STORM SEWER - EASEMENT EAST FROM SEDGEBROOK CRES.	DEC. 6	NO FLOW NOTED					
MC-5.8 W	82	24" STORM SEWER - EASEMENT EAST FROM SHANKHILL COURT	DEC. 6	NO FLOW NOTED					
MCW-6.1 W	76	54" STORM SEWER - EASEMENT EAST FROM NEW CROSS DRIVE INTO THE WATERCOURSE	DEC. 6	NO FLOW NOTED					
MC-5.7 W	70	56" STORM SEWER - EASEMENT SOUTH FROM RAVENCREST DR.	DEC. 7	3.4	286	8	278	-	0
MC-5.4 W-1	69	24" STORM SEWER - EASEMENT EAST FROM MARTIN GROVE RD.	DEC. 6	NO FLOW NOTED					
MC-5.4 W-2	68	15" STORM SEWER - EASEMENT WEST FROM HAMPSHIRE HEIGHTS	DEC. 7	46	746	70	676	-	187
MC-5.1 W-1	66	24" STORM SEWER - EASEMENT NORTH FROM LORRAINE GARDENS	DEC. 6	NO FLOW NOTED					
MC-5.1 W-2	67	18" STORM SEWER - EASEMENT SOUTH FROM RIVERCOVE DR.	DEC. 6	FLOWING, BUT NOT SUFFICIENT FOR SAMPLING					
MC-4.9 W	65	42" STORM SEWER - ECHO VALLEY RD.	DEC. 7	9	904	28	876	-	153
MC-4.6 W	86	30" STORM SEWER - EASEMENT EAST FROM WINGROVE HILL	DEC. 6	FLOWING, BUT NOT SUFFICIENT FOR SAMPLING					
MC-4.5 W	64	60" STORM SEWER - EASEMENT S. FROM BYWOOD DRIVE	DEC. 6	FLOWING, BUT NOT SUFFICIENT FOR SAMPLING					
MC-4.0 W	47	21" STORM SEWER - EASEMENT EAST FROM BURNHAMTHORPE CRES.	DEC. 6	NO FLOW NOTED					
MC-3.9 W	46	33" STORM SEWER - EASEMENT WEST FROM HATTON COURT	DEC. 6	NO FLOW NOTED					

SAMPLING POINT No.	TOWNSHIP KEY No.	LOCATION AND GENERAL DESCRIPTION	DATE 1960	5-DAY B.O.D.	S O L I D S			TURBIDITY IN SILICA UNITS	M.F. COLIFORM COUNT/100 ML.
					TOTAL	SUSP.	DISS.		
MC-3.9 R-1	-	BY-PASS OUTLET - RIVERBANK DR. SEWAGE PUMPING STATION	DEC. 6		NO FLOW NOTED				
MC-3.9 R-2	-	BY-PASS OUTLET - RIVERBANK DR. SEWAGE PUMPING STATION	DEC. 6		NO FLOW NOTED				
MC1-4.2 W	T25	36" STORM SEWER - EASEMENT SOUTH FROM CEDARLAND DRIVE TO ISLINGTON GOLF COURSE	DEC. 7		NO FLOW NOTED				
MC-3.8 W-1	-	STORM SEWER OUTLET - NORTH SIDE DUNDAS ST. TO WEST SIDE OF CREEK	NOV. 21	4.0	204	-	-	7	68
MC-3.8 W-2	-	STORM SEWER OUTLET - NORTH SIDE DUNDAS ST. TO EAST SIDE OF CREEK	FEB. 28/61		NO FLOW NOTED				
MC-3.8	-	MIMICO CREEK AT DUNDAS STREET	AUG. 3 NOV. 21	2.8 4.0	- 576	- -	- -	11 8	27,000 19
MC-3.8 W-3	44	12" AND 18" STORM SEWERS - SOUTH SIDE DUNDAS STREET INTO CULVERT WEST SIDE MIMICO CREEK	NOV. 21		NO FLOW NOTED				
MC-3.8 W-4	45	18" STORM SEWER - ISLINGTON AVE. INTO CULVERT EAST SIDE MIMICO CREEK	DEC. 6	FLOWING, BUT NOT SUFFICIENT FOR SAMPLING					
MC-3.8 W-5	45	33" STORM SEWER - ISLINGTON AVE. INTO CULVERT EAST SIDE MIMICO CREEK	DEC. 6	FLOWING, BUT NOT SUFFICIENT FOR SAMPLING					
MC-3.4 W	43	48" STORM SEWER - EAST OF ISLINGTON AVE. NORTH OF LLEWELLYN AVE.	DEC. 6	FLOWING, BUT NOT SUFFICIENT FOR SAMPLING					
MC-3.3 W	42	33" STORM SEWER - EASEMENT WEST OF WESTROSE AVENUE	DEC. 7	6.2	306	66	240	-	39
MC-3.1	-	MIMICO CREEK AT BLOOR ST.	AUG. 3 NOV. 22	2.5 3.0	- 586	- -	- -	12 24	25,000 200
MC-3.1 W-1	41	65" x 40" STORM SEWER - SOUTH SIDE BLOOR ST. W. INTO WEST SIDE OF MIMICO CREEK	NOV. 22	17	498	-	-	7	1,390
MC-3.1 W-2	40	36" STORM SEWER - NORTH SIDE BLOOR ST. W. INTO EAST SIDE MIMICO CREEK	NOV. 22	2.8	680	-	-	3	900

SAMPLING POINT No.	TOWNSHIP KEY No.	LOCATION AND GENERAL DESCRIPTION	DATE 1960	5-DAY B.O.D.	S O L I D S			TURBIDITY IN SILICA UNITS	M.F. COLIFORM COUNT/100 ML.
					TOTAL	SUSP.	DISS.		
MC-2.9 W-1	141	STORM SEWER - MEADOWVALE DR.	DEC. 7	5.4	1028	10	1018	-	297
MC-2.9 W-2	142	STORM SEWER - MEADOWVALE DR.	DEC. 2		NO FLOW NOTED				
MC-2.8 W-1	-	STORM OUTLET VAN DUSEN BLVD. INTO EAST SIDE OF CREEK	DEC. 2		NO FLOW NOTED				
MC-2.8 W-2	-	STORM OUTLET VAN DUSEN BLVD. INTO EAST SIDE OF CREEK	DEC. 2		NO FLOW NOTED				
MC-2.8 W-3	137	15" STORM SEWER - NORTH SIDE VAN DUSEN BLVD.	DEC. 2		NO FLOW NOTED				
MC-2.8 W-4	39	27" STORM SEWER - SOUTH SIDE VAN DUSEN BLVD.	DEC. 2		NO FLOW NOTED				
MC-2.4 W	26	33" STORM SEWER - EASEMENT AT LELAND AVENUE	DEC. 2		NO FLOW NOTED				
MC-2.3 W	27	30" STORM SEWER - WEST SIDE OF ROYAL YORK ROAD	NOV. 22	28	648	286	362	-	500
MC-2.3	-	MIMICO CREEK AT ROYAL YORK RD.	AUG. 3 NOV. 22	1.9 3.2	- 526	- -	- -	7 6	680 40
MC-2.0 W-1	23	21" STORM SEWER - SOUTH LIMIT HUMBERVALE BLVD.	DEC. 2		NO FLOW NOTED				
MC-2.0 W-2	24	18" STORM SEWER - EASEMENT WEST FROM REID MANOR			NOT LOCATED				
MC-1.9 W	25	83" x 53" STORM SEWER - EASEMENT ON EXTENSION OF NORSEMAN STREET	DEC. 7	5.7	560	24	536	-	0
MCT-2.0 W-1	T7	54" STORM SEWER - BAYS HILL DR. AT DARLINGTON INTO WATERCOURSE			NOT EXAMINED				
MCT-2.0 W-2	T8	12" STORM SEWER - DARLINGTON AT BAYS HILL DRIVE INTO WATERCOURSE			NOT EXAMINED				
MC-1.6 W 1	16	24" STORM SEWER AND 36" STORM SEWER - BERRY ROAD INTO BOX AT WEST SIDE OF MIMICO CREEK	NOV. 22	22	342	-	-	4	20
					ETHER SOLUBLES - 24; PHENOL IN P.P.B. - 6.				

SAMPLING POINT No.	TOWNSHIP KEY No.	LOCATION AND GENERAL DESCRIPTION	DATE 1960	5-DAY B.O.D.	S O L I D S			TURBIDITY IN SILICA UNITS	M.F. COLIFORM COUNT/100 ML.
					TOTAL	SUSP.	DISS.		
MC-1.4 W	6	24" STORM SEWER - EASEMENT SOUTH FROM CALEDON RD.	DEC. 7	1.9	562	18	544	-	59
MC-1.5 W	14	12" STORM SEWER - EASEMENT AT BEAUCOURT RD.	DEC. 2		NO FLOW NOTED				
MC-1.2 W-1	13	15" STORM SEWER - EASEMENT NORTH OF DELROY DR.	DEC. 2	FLOWING, BUT NOT SUFFICIENT FOR SAMPLING					
MC-1.2 W-2	12	18" STORM SEWER - DELROY RD. AT BERL AVE.	DEC. 2	FLOWING, BUT NOT SUFFICIENT FOR SAMPLING					
MC-1.1 W	17	24" STORM SEWER - EASEMENT AT BONNYVIEW DRIVE SOUTH OF DODDINGTON DR.	DEC. 2	5.	802	4	798	-	20
MC-1.0 W-1	10	24" STORM SEWER - BONNYVIEW DR. AND EASEMENT TO MIMICO CREEK	DEC. 2		NO FLOW NOTED				
MC-1.0 W-2	11	12" STORM SEWER - WOODFORD PK. RD. AND EASEMENT TO MIMICO CREEK			NOT LOCATED				
MC-0.8 W-1	9	24" STORM SEWER - NORTH SIDE THE QUEENSWAY	DEC. 2		NO FLOW NOTED				
MC-0.5 W-2	140	STORM SEWER - THE QUEENSWAY	DEC. 2		NO FLOW NOTED				
MC-0.8	-	MIMICO CREEK AT THE QUEENSWAY	AUG. 3 NOV. 22	10 6.	- 540	- -	- -	8 25	26,000 30
MC-0.8 W-3	8	15" STORM SEWER - SOUTH SIDE THE QUEENSWAY AT CATHRON AVE.	DEC. 2		NO FLOW NOTED				
MC-0.8 I	-	INDUSTRIAL WASTE OUTFALL - CANADIAN GERMICIDE CO. LTD.	FEB. 28/61	2850 PHENOL IN P.P.B. - 1250;	5822	2716	3106	-	0
				PH - 11.3;				ALKALINITY - 2100	
MCM-0.6 W	7	54" STORM SEWER - SOUTH SIDE MENDOTA RD. AT MILTON INT'D BOX UNDER Q.E. OUTLET AT GRAND AVE.	DEC. 2	9. PHENOL IN P.P.B. - 40	752	22	730	-	50
MCM-0.3 W	-	STORM SEWER - AUDLEY AND NEWCASTLE STREETS	DEC. 2	64	380	24	356	-	60
MCM-0.3	-	ETOBICOKE BRANCH SOUTH OF RAILROAD	AUG. 3 NOV. 22	28 22	- 462	- -	- -	34 23	>150,000 1,070

SAMPLING POINT NO.	TOWNSHIP KEY NO.	LOCATION AND GENERAL DESCRIPTION	DATE 1960	5-DAY B.O.D.	S O L I D S			TURBIDITY IN SILICA UNITS	M.F. COLIFORM COUNT/100 ML.
					TOTAL	SUSP.	DISS.		
MCM-0.3 [-1]	-	ASSOCIATED MINERAL WOOL-WASH WATER	NOV. 22	72 PHENOL IN P.P.B. - 5,000.	512	210	32	-	10
MCM-0.3 [-2]	-	ASSOCIATED MINERAL WOOL-COOLING WATER OVERFLOW	NOV. 22		NOT SAMPLED				
MCM-0.2	-	ETOBICOKE BRANCH JUST ABOVE CONFLUENCE	AUG. 3 NOV. 22	31 29	- 454	- -	- -	25 21	30,000 450
MC-0.2 	-	J.A. WILSON LIGHTING & DISPLAY INDUSTRIAL OUTFALL			NOT EXAMINED				
MC-0.1 W	4	15" STORM SEWER - NORTH SIDE LAKE SHORE RD.	NOV. 22	8. ETHER SOLUBLES - 35;	180	-	-	4	40
MC-0.1	-	MIMICO CREEK AT LAKE SHORE RD.	AUG. 3 NOV. 22	11 17	- 544	- -	- -	43 8	190,000 460

TABLE 2

Malton Sewage Treatment Plant

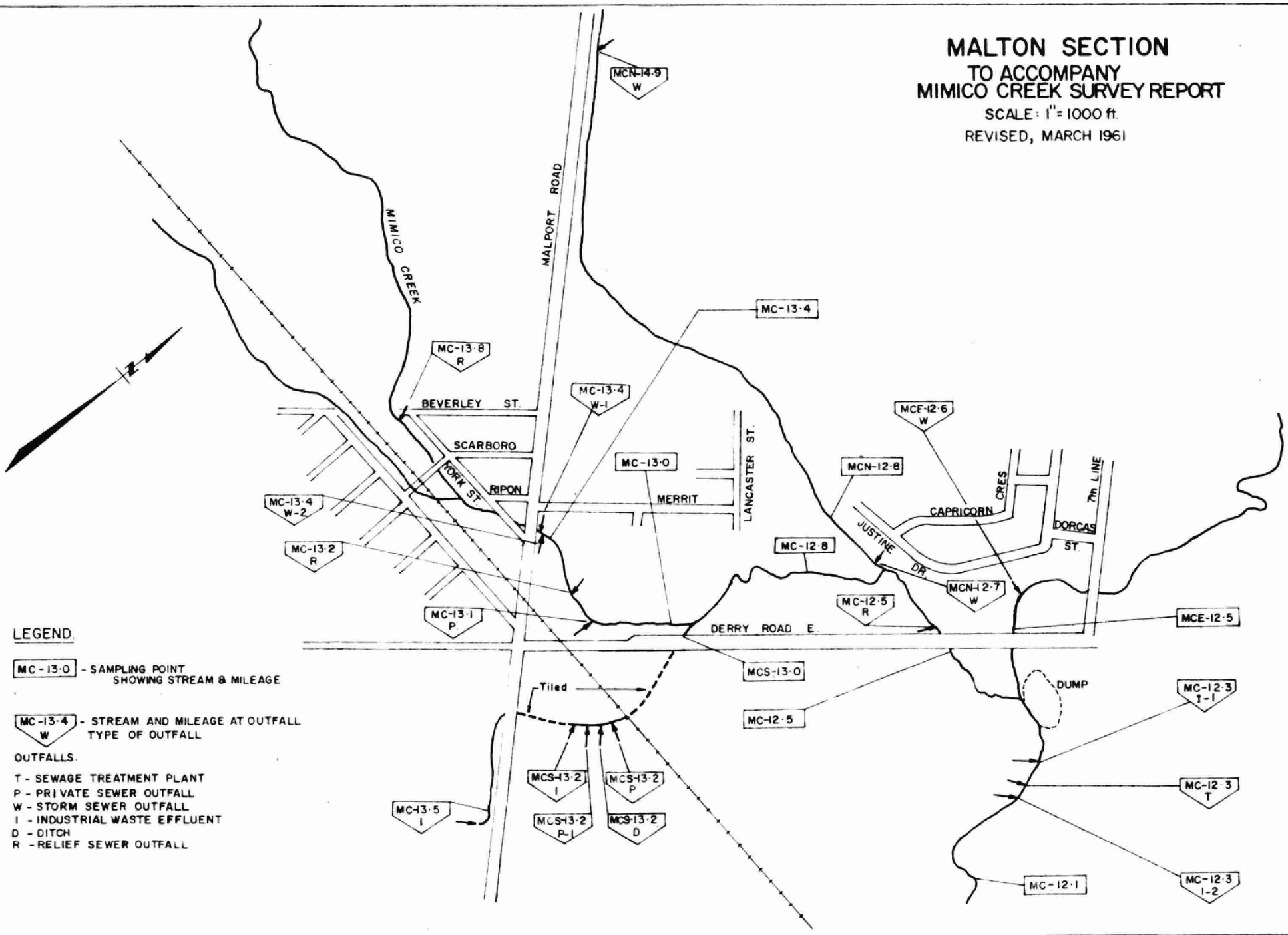
Summary of Analyses 1960 - 1961

Sampling Point	M.F. Coliform Count per 100 ml.	5-Day B.O.D. p.p.m.	Susp. Solids p.p.m.
Raw Sewage			
Average	-	266	797
Maximum	-	410	4706
Minimum	-	170	224
No. of samples	-	12	12
Final Effluent			
Average	-	22.9	27
Maximum	<10	70.0	46
Minimum	0	5.6	4
No. of samples	3	15	14

MALTON SECTION TO ACCOMPANY MIMICO CREEK SURVEY REPORT

SCALE: 1" = 1000 ft.

REVISED, MARCH 1961



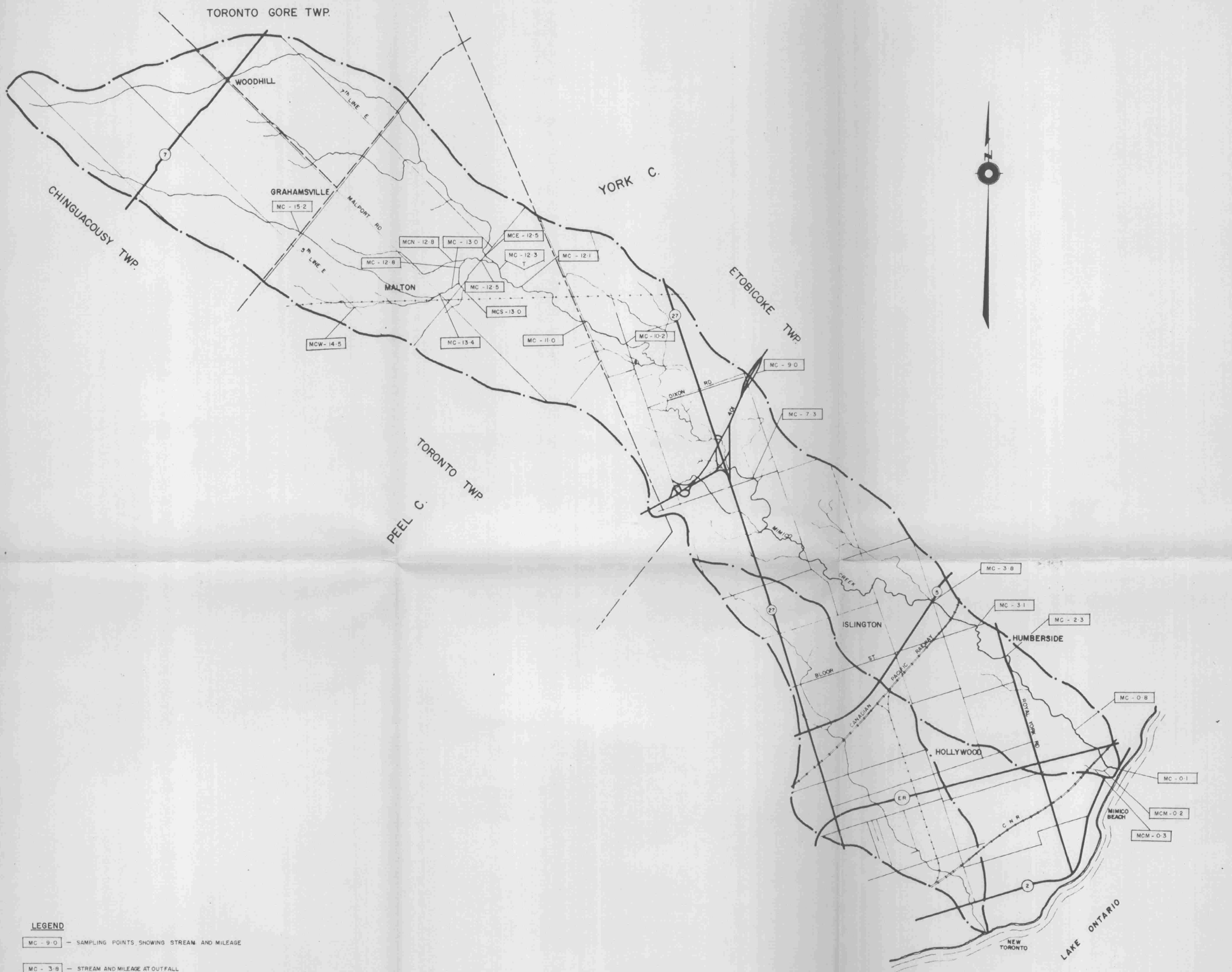
LEGEND

MC-13-0 - SAMPLING POINT
SHOWING STREAM & MILEAGE

MC-13-4 - STREAM AND MILEAGE AT OUTFALL
W TYPE OF OUTFALL

OUTFALLS.

T - SEWAGE TREATMENT PLANT
P - PRIVATE SEWER OUTFALL
W - STORM SEWER OUTFALL
I - INDUSTRIAL WASTE EFFLUENT
D - DITCH
R - RELIEF SEWER OUTFALL



LEGEND

MC - 9.0 - SAMPLING POINTS SHOWING STREAM AND MILEAGE

MC - 3.8 - STREAM AND MILEAGE AT OUTFALL
 T - SEWAGE TREATMENT PLANT OUTFALL

ACREAGE MIMICO WATERSHED 17712 ACRES

--- COUNTY BOUNDARY
 --- TWP. BOUNDARY

ONTARIO WATER RESOURCES COMMISSION	
MIMICO CREEK WATERSHED	
SCALE 1:50,000	
DRAWN BY: S.H.	DATE: APRIL 1961
CHECKED BY:	DRAWING No. 61-25-A

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